



SP 5000 DI

Product information

Extremely stable laser interferometer for high-precision length or angle measurements

Laser interferometer measurement system

SP 5000 DI

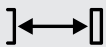
Our ultra-stable differential laser interferometer SP 5000 DI is characterised by its unique thermal stability and can be used for long-term measurements in research and development, such as for material testing.

Thanks to its design, with an external reference beam, the measurement system can be placed at a longer distance from the measurement location without significantly affecting the resolution or stability of the measurement. The length resolution of the interferometer is 5 μm and this can be achieved even under normal laboratory conditions thanks to the differential principle of the measurement system.

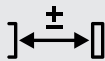


The measurement range for length measurement is several meters if tilt-invariant reflectors are used for the measurements. The system has a modular design and can therefore be adapted to specific measurement tasks.

Adjustments can be made simply and with long-term stability. The construction of multi-axis systems on the basis of the SP 5000 DI interferometer also allows multi-coordinate measurements.



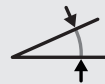
2 m
with plane-mirror
5 m
with reflector



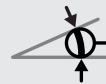
0.1 $\mu\text{m}/\text{m}$



5 μm

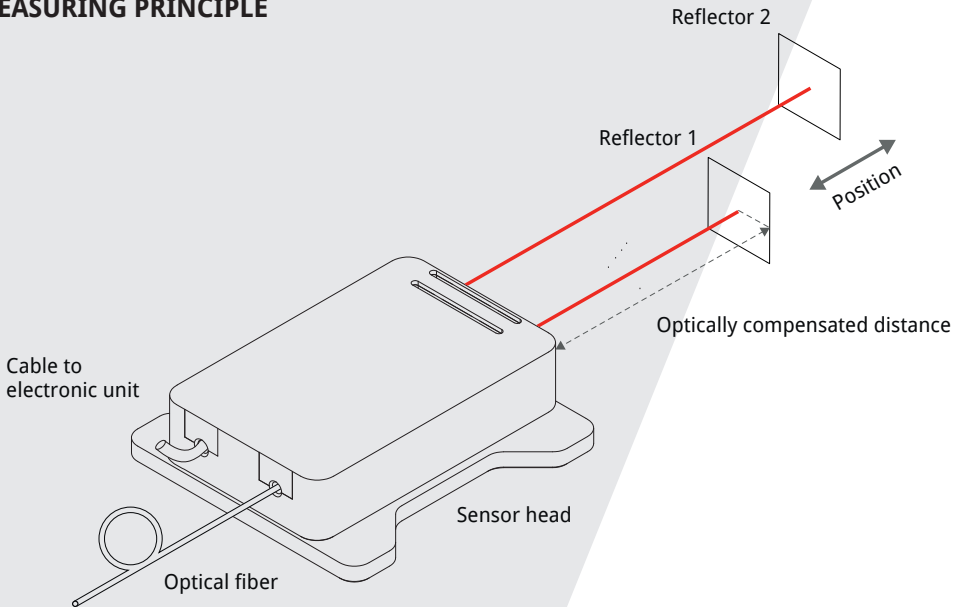


± 1.5 arcmin
with plane-mirror
 $\pm 15^\circ$
with reflector



0.001 arcsec

MEASURING PRINCIPLE



For customer-specific versions or integration in special measurement equipment, please contact us.

Further possible applications:

- The differential laser interferometer is available as an OEM version for installation as an encoder in machine axes. The SP 5000 DI is also available as a vacuum-optimised version for taking measurements in a vacuum.
- The standard beam distance is 21 mm. We can provide other beam distances on enquiry.

Ideal for

- Long-term measurements
- Development
- Science/research
- OEM applications
- Exacting stability requirements

PRECISION & QUALITY
MADE IN GERMANY

For customer-specific versions, OEM applications or integration in special measurement stations, please contact us.

We will be happy to personally assist you in finding solutions for your measuring tasks.

SIOS Meßtechnik GmbH
Am Vogelherd 46
98693 Ilmenau / Germany

phone +49 (0) 3677 64 47-0
e-mail contact@sios.de

www.sios-precision.com